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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/526,184

01/03/2006

Yoshitsugu Morita

71,051-003

7050

27305

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11/26/2008

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EXAMINER

WESTERBERG, NISSA M

ART UNIT

PAPER NUMBER

1618

MAIL DATE

DELIVERY MODE

11/26/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/526,184	Applicant(s) MORITA ET AL.	
	Examiner Nissa M. Westerberg	Art Unit 1618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3 - 10, 12 is/are pending in the application.
- 4a) Of the above claim(s) 6 and 7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3 - 5, 8 - 10, 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's arguments filed August 28, 2008 have been considered but are moot in view of the new ground(s) of rejection. The following rejections and/or objections constitute the complete set presently being applied to the instant application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 3 – 5, 8 – 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dalle et al. (US 6,013,682) in view of Lochhead et al. (Cosmetics & Toiletries 1993).

Dalle et al. discloses silicone in water emulsions with a wide variety of silicone volume fractions (abstract). As shown in the examples, a linear organosilicon polymer whose main chain is composed of diorganosiloxane units and alkylene units (component A of the instant claims) is prepared by a platinum catalyzed reaction of dimethylvinylsiloxy terminated polydimethylsiloxane with a organohydrogenpolysiloxane with the average formula $\text{Me}_2\text{HSiO}(\text{Me}_2\text{SiO})_{20}\text{SiMe}_2\text{H}$ (col 7, ln 49 – 65). The molecular weight of the prepared silicone can be in the range of about $1 \text{ mm}^2/\text{sec}$ at 25°C to in excess of $10^8 \text{ mm}^2/\text{sec}$ at 25°C (col 6, ln 55 – 56). The silicone loading of the emulsion can range from about 1 to about 94 weight percent (col 6, ln 53 – 54). The prepared emulsion are useful in the standard application for silicone emulsions, including skin creams, facial treatments, personal and facial cleansers, hair shampoos, hair conditioners, hair sprays and mousses (col 7, ln 7 – 19). When used in personal care products, they are generally incorporated in amounts of about 0.01 to about 50 weight

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% of the product (col 7, ln 28 – 31). They can be mixed with a variety of ingredients, including polymers, deposition polymers, surfactants detergents, moisturizing agents and other conventional care ingredients (col 7, ln 31 – 37).

Dalle et al. does not explicitly disclose the inclusion of an oil that is liquid at room temperature and does not contain hydrosilation reactive groups, component (B) of the instant claims.

Lochhead et al. discloses dimethicone, an oil that is liquid at room temperature and does not contain hydrosilation reactive groups, as a conventional ingredient in cosmetic compositions (p 117, col 2). Dimethicone functions as an emollient, lubricant and water repellant in hair and skin care products. Depending on the form of the product (e.g., shampoo or skin care emulsion) the amount of dimethicone can range from 0.5 to 10% of the composition. The dimethicone fluid can have a viscosity ranging from 0.65 to 50,000 centipoise (cps).

It would have been obvious to the person of ordinary skill in the art at the time the invention was made to incorporate dimethicone into the silicone emulsion containing cosmetic composition as taught by Dalle et al. The person of ordinary skill in the art would have been motivated to make those modifications and reasonably would have expected success because Dalle et al. teaches that the emulsion comprising component (A) can also include conventional ingredients such as dimethicone to act as emollient and water repellant in the formulation. The amount of the various polymer ingredients present in the formulation and the desirable viscosity depend on the type of personal care product being prepared. The amount of a specific ingredient in a

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composition and the viscosity are result effective parameters that a person of ordinary skill in the art would routinely optimize. Optimization of parameters is a routine practice that would be obvious for a person of ordinary skill in the art to employ and reasonably would expect success.

6. Claims 1, 3 – 5, 8 – 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sang et al. (US 6,143,310) in view of Dalle et al. (US 6,013,682).

Sang et al. discloses cosmetic compositions comprising a continuous oil phase that preferably comprises a mixture of volatile and non-volatile silicones (col 3, ln 66 – col 4, ln 63) and a discontinuous aqueous phase (col 2, ln 56 – 61). Among the disclosed silicones which may be used are cyclic dimethylsilicone (col 4, ln 14 – 17), linear polydimethylsiloxanes (col 4, ln 17 – 19) and polydimethylphenylsiloxane (col 4, ln 49 – 50). These compounds do not contain any hydrosilation reactive groups and are liquids at 25°C. The linear volatile silicones have viscosities of less than about 5 centistokes at 25°C, the cyclic volatile silicones have viscosities of less than about 10 centistokes and the nonvolatile silicones have an average viscosity of from about 10 to about 100,000 centipoise (col 4, ln 19 – 22; 29 – 32). As shown in the example formulations (col 20), a wide range of ratios for the two different siloxane components can be used to prepare formulations. In the examples, the ratio of cyclomethicone:cyclomeithicone/dimethicone copolyol are approximately 1:0.6, 1:1.9, 1:0.9, 1:0.6 and 1:3.5 respectively.

Sang et al. does not disclose the use of linear organosilicon polymers with a main chain composed of diorganosiloxane units and alkylene units (component (A) of the instant claims).

Dalle et al. discloses a linear organosilicon polymer whose main chain is composed of diorganosiloxane units and alkylene units (component A of the instant claims) is prepared by a platinum catalyzed reaction of dimethylvinylsiloxo terminated polydimethylsiloxane with a organohydrogenpolysiloxane with the average formula $\text{Me}_2\text{HSiO}(\text{Me}_2\text{SiO})_{20}\text{SiMe}_2\text{H}$ (col 7, ln 49 – 65). The molecular weight of the silicone can be in the range of about 1 mm²/sec at 25°C to in excess of 10⁸ mm²/sec at 25°C (col 6, ln 55 – 56). The polymer can be used in silicone in water emulsions with a wide variety of silicone volume fractions (abstract). The silicone loading of the emulsion can range from about 1 to about 94 weight percent (col 6, ln 53 – 54). The prepared emulsion are useful in the standard application for silicone emulsions, including skin creams, facial treatments, personal and facial cleansers, hair shampoos, hair conditioners, hair sprays and mousses (col 7, ln 7 – 19). When used in personal care products, they are generally incorporated in amounts of about 0.01 to about 50 weight % of the product (col 7, ln 28 – 31). They can be mixed with a variety of ingredients, including polymers, deposition polymers, surfactants, detergents, moisturizing agents and other conventional care ingredients (col 7, ln 31 – 37).

It would have been obvious to the person of ordinary skill in the art at the time the invention was made to incorporate the alkylene-diorganosiloxane linear organosilicon polymer of Dalle et al. into the silicone oil containing personal care cosmetic emulsion of

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Sang et al. The person of ordinary skill in the art would have been motivated to make those modifications and reasonably would have expected success because a wide variety of silicone ingredients in variety of amounts can be incorporated into the personal care emulsions. The polymer component (A) taught by Dalle et al. allows for emulsions with a wide variety of silicone volume fractions, particle size and molecular weights to be prepared wherein the particle size and molecule weight of the silicone inside the droplets are independent parameters (col 1, ln 66 – col 2, ln 6). Additionally, the emulsions can be prepared without heat, acidic catalysts or basic catalysts (co 6, ln 49 – 51) and produces high molecular weight silicone droplets that are easy to handle and the viscosity can be determined before emulsion to allow for easier quality checks (col 7, ln 1 – 7).

The amount of a specific ingredient in a composition is clearly a result effective parameter that a person of ordinary skill in the art would routinely optimize.

Optimization of parameters is a routine practice that would be obvious for a person of ordinary skill in the art to employ and reasonably would expect success. Therefore, one would also optimize the ratio of the various components, such as the linear alkylene-diorganosilicon polymer to the liquid oil without hydrosilation reactive groups.

The references do not specifically teach the viscosity of the final composition as claimed by Applicant. The viscosity of a composition is clearly a results effective parameter that a person of ordinary skill in the art would routinely optimize. The amount of a specific ingredient in a composition is clearly a result effective parameter that a person of ordinary skill in the art would routinely optimize. Optimization of parameters is

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a routine practice that would be obvious for a person of ordinary skill in the art to employ and reasonably would expect success. It would have been customary for an artisan of ordinary skill to determine the optimal amount of each ingredient to add in order to best achieve the desired results, such as easy mixing while allowing for the formation of an emulsion. Too high of a viscosity would impair mixing while too low of a viscosity could impair emulsion formation. The viscosity is also dependent on the type of composition being prepared as the viscosity of a hair spray and a shampoo are not the same. Therefore, absent some demonstration of unexpected results for the claimed parameters, the optimization of the viscosity of the composition would have been obvious at the time of the instant invention.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nissa M. Westerberg whose telephone number is (571)270-3532. The examiner can normally be reached on M - F, 8:00 a.m. - 4 p.m. ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Hartley can be reached on (571) 272-0616. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NMW

/Jake M. Vu/
Examiner, Art Unit 1618